

# MedMira Inc.

Management's Discussion & Analysis For the three months ended October 31, 2017

# **Forward looking statements**

This document contains forward looking statements, such as statements regarding future sales opportunities in various global regions and financing initiatives that are based on current expectations of management. These statements involve uncertainties and risks, including MedMira Inc.'s ("MedMira" or the "Company") ability to obtain and/or access additional financing with acceptable terms, and delays in anticipated product sales. Such forward-looking statements should be given careful consideration and undue reliance should not be placed on these statements.

The preparation of Management's Discussion and Analysis ("MD&A") may require management to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the financial statements and the reported amount of revenue and expenses during the reporting period. Management bases estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. Management believes the accounting policies, outlined in the Significant Accounting Policies section of its October 31, 2017 consolidated financial statements, affect its more significant judgments and estimates used in the preparation of its consolidated financial statements.

# Introduction

The MD&A was issued and approved by the Board of Directors on the 22<sup>nd</sup> of December 2017. The following MD&A for the three months ended October 31, 2017 has been prepared to help investors understand the financial performance of MedMira in the broader context of the Company's strategic direction, the risk and opportunities as understood by management, and the key metrics that are relevant to the Company's performance. The Audit Committee of the Board of Directors has reviewed this document and all other publicly reported financial information for integrity, usefulness, reliability and consistency.

This document should be read in conjunction with the audited consolidated financial statements for the year ended July 31, 2017. Annual references are to the Company's fiscal years, which end on July 31. All amounts are expressed in Canadian dollars ("CAD") unless otherwise noted.

Additional information about MedMira, this document, and the related quarterly financial statements ended October 31, 2017 can be viewed on the Company's website at www.medmira.com and are available on SEDAR at www.sedar.com.

# About MedMira

MedMira is a biotechnology company engaged in the development and commercialization of rapid diagnostics and technology platforms. The Company is headquartered in Halifax, Nova Scotia, Canada and is listed on the TSX Venture Exchange ("TSX-V") under the symbol MIR.

The patented MedMira Rapid Vertical Flow (RVF) Technology<sup>™</sup> platform is the basis for the Company's line of rapid tests. Diagnostic applications based on this technology are highly accurate, easy-to-use, and produce instant results – a strong advantage over most other rapid diagnostics on the market today. These features are enhanced further with ability to deliver multiplex results on one test device with just one drop of specimen. The Company has created a new generation of rapid tests that are based on the need to provide immediate answers without increasing costs.

MedMira's technology platform and growing portfolio of diagnostic tools demonstrate excellence in performance and quality in the highly competitive diagnostics industry. More than \$30 million has been invested in perfecting MedMira's core technology, which has proven itself time and time again with its excellent clinical performance and its success in

rigorous evaluations and inspections, leading to regulatory approvals for rapid diagnostic solutions in the United States (US Food and Drug Administration ("FDA")), Canada (Health Canada), the notified body in the European Union (CE Mark), and China (CFDA – formerly known as SFDA) and in a number of countries in Latin America, Africa, and Asia. The Company's quality system is ISO 9001 and ISO 13485 certified.

MedMira sells its rapid tests through a network of medical distributors and strategic business development partners to customers in all sectors of the healthcare industry, including laboratories, hospitals, point-of-care facilities, governments, and public health agencies.

In addition to clinical diagnostics, the Company offers the Miriad<sup>™</sup> product line to create new opportunities in the high value technology licensing sector. This business line allows the Company to monetize its award-winning technology and core capabilities, including R&D, product development, and regulatory proficiency. Miriad provides access to MedMira's RVF Technology for researchers, developers, and biotech companies on a license basis to facilitate the creation of new rapid tests or the transition of existing tests to this unique platform. Infiltrating new and different sectors of the diagnostic industry, such as veterinary and environmental, with the Company's technology, enables MedMira to build a higher degree of global awareness, generate new revenue streams, and provide a superior diagnostic platform to the market.

# **Intellectual property**

The Company strives to protect its intellectual property in established and emerging markets around the world as warranted. MedMira's intellectual property portfolio for its Rapid Vertical Flow Technology and the methodology behind its rapid diagnostics includes the following:

Patent #	Title	Jurisdiction
9,164,087	Rapid Diagnostic Device, assay and multifunctional Buffer	United States
9,086,410	Downward or vertical flow diagnostic device and assay	United States
8,025,850	Rapid Diagnostic Device, Assay and Multifunctional Buffer	United States
8,287,817	Rapid Diagnostic Device, Assay and Multifunctional Buffer	United States
8,586,375	Rapid Diagnostic Device, Assay and Multifunctional Buffer	United States
7,531,362	Rapid Diagnostic Device, Assay and Multifunctional Buffer	United States
D706945	Diagnostic Device	United States
D706466	Diagnostic Device	United States
EP1417489	Rapid Diagnostic Device and Assay	Europe
EP1328811	HCV Mosaic Antigen Composition	Europe
ZL02819646.5	Rapid Diagnostic Device and Assay	China
2,493,616	Rapid Diagnostic Device, Assay and Multifunctional Buffer	Canada

The Company has other patents pending patents in the US as well as two design patents in force or pending in eight markets.

The Company's corporate and product brand names are protected by trademarks in the US and Canada.



# **Corporate update**

In Q1 FY2018, MedMira continued to focus on the U.S. market with the Reveal G4 and Miriad product lines. Working closely with MedMira's distribution network, which includes Cardinal Health, VWR International, and Medline Industries, the team engaged with new and existing customers to promote the products and build awareness within the U.S. healthcare and tissue and eye bank market segments.

During Q1, MedMira's R&D team maintained a solid product pipeline with development projects that support expansion of the Company's existing product lines. Additionally, the Company is continuously seeking avenues for ongoing platform exploration and innovation.

The Company's, Finance and Operations teams maintained fiscal constraints in the first quarter, to ensure the Company could support a balanced mix of cash management and investment in short and long term growth through sales and product commercialization.

# **Financial results**

# Basis of preparation and significant accounting policies

The basis of financial statement preparation and the significant accounting policies of MedMira are described in Notes 2 and 3 of the Company's condensed interim consolidated financial statements for the three months ended October 31, 2017 and its audited consolidated financial statements as at July 31, 2017.

Selected quarterly information (in thousands of dollars except per share amounts)									
Income statement	Q1 2018	Q4 2017	Q3 2017	Q2 2017	Q1 2017	Q4 2016	Q3 2016	Q2 2016	
	\$	\$	\$	\$	\$	\$	\$	\$	
Revenue	143	149	192	194	212	(957)	230	1,370	
Cost of sales	(30)	(40)	(76)	(60)	(92)	(991)	(66)	(1,134)	
Gross profit	113	109	116	134	120	34	164	236	
Operating expenses	(580)	(480)	(742)	(563)	(827)	(1,946)	(1,205)	(1,051)	
Other expenses (gains)	(169)	(186)	(126)	(121)	(94)	(378)	(173)	(167)	
Net earnings (loss) before tax	(630)	(557)	(752)	(550)	(801)	(2,290)	(1,214)	(982)	

# Selected quarterly information (in thousands of dollars except per share amounts)

#### **Balance sheet**

	Q1 2018	Q4 2017	Q3 2017	Q2 2017	Q1 2017	Q4 2016	Q3 2016	Q2 2016
	\$	\$	\$	\$	\$	\$	\$	\$
Current assets	551	581	582	674	695	678	1,930	3,648
Non-current assets	68	93	117	142	168	191	217	242
Total assets	619	674	699	816	863	869	2,147	3,890
Current liabilities	10,158	9,421	8,401	8,218	8,538	8,277	5,746	4,723
Non-current liabilities	-	237	737	286	-	255	2,201	3,753
Total liabilities	10,158	9,658	9,138	8,504	8,538	8,532	7,947	8,476
Total shareholders deficiency	(9,539)	(8,984)	(8,439)	(7,688)	(7,675)	(7,662)	(5,800)	(4,586)
Total liabilities and equity	619	674	699	816	863	870	2,147	3,890
Net earnings (loss) per share	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.002)	(0.001)

# First quarter analysis

	For the three m	For the three months ended		
	31-Oct-17	31-Oct-16	Better(worse)	
	\$	\$	\$	
Product				
Product sales	143,042	212,245	(69,203)	
Product cost of sales	(30,438)	(92,643)	62,205	
Gross margin on product	112,604	119,602	(6,998)	
Operating expenses				
Research and development	(115,604)	(166,684)	51,080	
Sales and marketing	(53,151)	(157,082)	103,931	
Other direct costs	(115,289)	(169,971)	54,682	
General and administrative	(295,816)	(333,344)	37,528	
Total operating expenses	(579,860)	(827,081)	247,221	
Operating loss	(467,256)	(707,479)	240,223	
Non-operating income (expenses)				
Financing	(168,918)	(94,330)	(74,588)	
Net (loss) income	(636,174)	(801,809)	165,635	

# Product revenue and gross margin

The Company recorded revenue from product sales in the three months ended October 31, 2017 of \$143,042 as compared to \$212,245 for the same period last year. The decrease in revenue was due to a change in ordering patterns with of one of the Company's US distributors. This pattern changed from just-in-time ordering to semi-annual bulk ordering.

Gross profit on product sales for the three months ended October 31, 2017 was \$ 112,604 compared to \$119,602 for the same period in 2016. The Company's gross profit decreased by approximately 6% despite the product revenue's decrease of 33%. The Company's gross profit margin remained stable due to the focus on the high margin US market, which enabled the Company to generate a higher operating contribution amount to the operating results.

# Operating expenses

Total operating expenses decreased by \$247,221 from \$827,081 for the three months ended October 31, 2016 to \$579,860 for the three months ended October 31, 2017.

- Research and development expenses for the three months ended October 31, 2017 were \$115,604 compared to \$166,684 for the same period in 2016. The decrease in research and development expenses are in line with the management's expectations as R&D projects and products in the pipeline move through various stages of discovery, development, and commercialization.
- Sales and marketing expenses for the three months ended October 31, 2017 were \$53,151 compared to \$157,082 for the same period in 2016. During Q1 FY2016, the Company had additional sales and marketing costs for the launch of Reveal G4 in the US market. This year, with no additional launch activities, the sales and marketing expenses decreased to levels required to maintain ongoing sales and marketing activities for Reveal G4 as well as the Miriad product line.

- Other direct costs for the three months ended October 31, 2017 were \$115,289, compared to \$169,971 for the same period in 2016. This decrease was due to the lower sales generated. However, considering the overall impact with increased profit margins in Q1 FY2018, this decrease had a positive effect on the financial position of the Company.
- General and administrative expenses were \$295,816 for the three months ended October 31, 2017, compared to \$333,344 for the same period in 2016. The decrease was in line with management's cost saving program in order to adjust for decrease of revenues.

# Non-operating expenses

Total non-operating expenses were \$168,918 in the three months ended October 31, 2017, compared to \$94,330 during the same period in fiscal year 2017. The increase in financing expenses was due to the accretion expenses the Company had to recognise on its debts as the interest rates are below market value.

# **Geographic information**

The Company organizes and records the sales and distribution of its products based on major geographical territories around the world. The table below provides the three month geographic breakdown of revenue.

	Product Revenu	le
	31-Oct-17	31-Oct-16
	\$	\$
North America	116,943	87,292
Latin America and the Caribbean	2,940	96,911
Asia Pacific	4,566	20,984
Europe	18,593	7,058
Total revenue	143,042	212,245

# Liquidity and capital resources

# Cash and working capital

The Company had a cash reserve of \$118,805 on October 31, 2017 as compared to \$155,915 on July 31, 2017. The Company's net working capital position as at October 31, 2017 was a deficit of \$9.6 million compared to the July 31, 2017 working capital deficit of \$8.8 million. The Company has incurred operational losses and negative cash flows on a cumulative basis since inception. For the three months ended October 31, 2017, the Company incurred a net loss from operating activities of approximately \$0.5 million and negative cash flows from operations of \$0.4 million, compared to a net loss from operations of \$0.8 million and negative cash flows from operations of \$0.7 million for the same period in 2016. The following table is a list of commitments the Company has:

		Less than 1			After 5
	Total	year	1 to 3 years	4 to 5 years	years
	\$	\$	\$	\$	\$
Debt Accounts payable and accrued	7,319,175	7,319,175	-	-	-
liabilities	2,729,298	2,729,298	-	-	-
Royalty provision	110,000	110,000		-	-
Operating leases	1,565,059	256,335	525,781	536,875	246,068
Total debt	11,723,532	10,414,808	525,781	536,875	246,068

# **Operating** activities

MedMira incurred negative cash flows from operations of approximately \$0.4 million for the three months ended October 31, 2017, compared to negative cash flows of \$0.7 million for the three months ended October 31, 2016. The decrease of negative cash flows was due to a number of factors such as a significant decrease of the Company's net loss by \$171,846.

### Financing activities

Cash inflows from financing activities were \$0.4 million for the three months ended October 31, 2017, compared to cash inflow of \$0.8 million for the same period in 2016.

#### Investing activities

Cash outflows from investments were \$0 for the three months ended October 31, 2017, compared to cash outflows of \$0 for the same period in 2016.

#### Debt

As at October 31, 2017, the Company had loans payable with a carrying value of \$7.3 million compared to \$6.9 million at July 31, 2017. The increase in the carrying value of loans payable from July 31, 2017 to October 31, 2017 is due to an increase in short term loans. The Company's loans have an average payment term of two years. During the past 18 months, the Company was in negotiations with all of its debt holders to ensure realistic debt repayment plans, which shall enable the Company to use its working capital for its growth and ensure its future stability. As these negotiations are ongoing, the Company must record these as in default until final agreements have been signed. The amount of loans in default was \$6.8 million.

Further discussion on liquidity and capital resources can be found in this document in the Liquidity Risk section, Risk and Uncertainties section of this document and in Notes 2 and 11 of the Company's consolidated financial statements for the three months ended October 31, 2017 and the audited consolidated financial statements for the year ended July 31, 2017.

# Equity/Shares

The Company is authorized to issue an unlimited number of common shares without par value. During the first quarter of FY2018 the Company issue no common shares. The number of issued and outstanding common shares on October 31, 2017 was 658,364,320. The number of issued and outstanding shares on October 31, 2017 was 63,419,302. The Company

is also authorized to issue an unlimited number of Series A preferred shares redeemable at \$0.01 per share after March 31, 2010, convertible into an equal number of common shares upon the Company meeting certain milestones. There were 5,000,000 Series A preferred shares issued and outstanding on October 31, 2016.

The Company had 2,594,792 outstanding stock options on October 31, 2017. The outstanding stock options have a weighted average exercise price of \$0.10 per share and a weighted average remaining term of 2.3 years. The number of outstanding warrants on October 31, 2017 was 144,000,000. The outstanding warrants have a weighted average exercise price of \$0.10 per share.

# Off balance sheet arrangements

The Company was not party to any off balance sheet arrangements as of October 31, 2017.

### Financial instruments – fair value

The Company recognizes financial instruments based on classification. Depending on the financial instruments' classification, changes in subsequent measurements are recognized in net loss or other comprehensive loss. The Company has implemented the following classifications:

### Financial assets

- Cash: Classified as loans and receivables and recorded at amortized cost using the effective interest method.
- Trade and other receivables: Classified as loans and receivables and recorded at amortized cost using the effective interest method.

# Financial liabilities

- Total long term debt, accounts payable and accrued liabilities: After initial fair value measurement, these financial liabilities are measured at amortized cost using the effective interest method.
- Royalty agreements: The Company records its provision for royalty at fair value. Fair value is determined using the discounted cash flow method using the Company's best estimate for future cash flows discounted at a rate that considers the credit risk of the Company.
- Management believes the carrying value of cash, trade and other receivables, long term debt, and accounts payable and accrued liabilities approximate fair value at year-end due to their short term nature.

Fair value estimates are made at a specific point in time based on relevant market information. These estimates involve uncertainties and matters of significant judgement and cannot be determined with precision. Change in assumptions and estimates could significantly affect fair values

#### Financial instruments – risk factors

MedMira has exposure to the following risks from its financial instruments: liquidity risk, credit risk, currency risk, and interest rate risk. Management monitors risk levels and reviews risk management activities as necessary.

# Liquidity risk

The Company manages liquidity by forecasting and monitoring operating cash flows and the use of revolving credit facilities and share issuances.

The Company has incurred losses and negative cash flows from operations on a cumulative basis since inception. For the three months ended October 31, 2017, the Company realized a net loss of \$0.6 million (October 31, 2016 - \$0.8 million), consisting of a net loss from operations of \$0.5 million (October 31, 2016 - \$0.7 million), and other non-operating losses of \$0.2 million (October 31, 2016 - \$0.1 million). Negative cash flows from operations were \$0.4 million (October 31, 2017 - \$86.1 million) and a negative working capital position of \$9.6 million (July 31, 2017 - \$86.1 million) and a negative working capital position of \$9.6 million (July 31, 2017 - \$8.8 million). In addition, as at October 31, 2017, \$6.8 million of debt was in default. The Company currently has insufficient cash to fund its operations for the next 12 months. In addition to its ongoing working capital requirements, the Company must secure sufficient funding for its research and development programs for existing commitments, including its current portion of debt of approximately \$7.3 million. These material uncertainties may cast significant doubt about the Company's ability to continue as a going concern.

The Company's objectives in managing capital are to ensure it can meet its ongoing working capital requirements. The Company must secure sufficient capital to support its capital requirements for research and development programs, existing commitments, including its current portion of debt of approximately \$7.3 million, as well as growth opportunities.

Management dedicates significant time to pursuing investment alternatives that will fund the Company's operations and growth opportunities so it can continue as a going concern. As of October 31, 2017, potential investors were identified and negotiations were initiated to secure the necessary financing through the issuance of new equity. Debt arrangements were also ongoing with the Company's major shareholder and other debt holders. Subsequent to the close of the first quarter of FY2018 management continues investor negotiations with the identified parties, nevertheless, there is no assurance that this initiative will be successful.

# Credit risk

The Company exposed to credit risk in relation to its trade accounts receivable. To mitigate such risk, the Company continuously monitors the financial condition of its customers and reviews the credit history or worthiness of each new customer. The Company mitigates this risk by requiring a 50% down payment on most orders at the time of purchase, and the remaining 50% prior to shipment. The Company establishes an allowance for doubtful accounts based on specific credit risk of its customers by examining such factors as the number of overdue days of the customers' balance outstanding as well as the customers' collection history. Since 81% of the Company's sales are with three large international companies there is no significant concentration of credit risk. The Company also has a receivable of \$112,000 outstanding from the Government of Canada and as a result, there is no significant credit risk on this amount.

# Currency risk

MedMira receives most of its revenues in foreign currencies and incurs expenses in US and Canadian currencies. As a result, the Company is subject to uncertainty as foreign exchange rates fluctuate. The exchange fluctuations from year to year have accounted for a significant portion of the Company's exchange gain and loss. Most sales are in USD, however, they are recorded at the exchange rate prevailing on or near the transaction date and collected in a timely manner.

The Company also experiences currency exposure resulting from balance sheet fluctuations of US-denominated cash, accounts receivable, accounts payable and US-denominated promissory notes.

MedMira mitigates this currency risk by maintaining a balance of USD currency which is used to pay down USdenominated liabilities and replenishes the balance through US-denominated revenues.

#### Interest rate risk

The Company is not exposed to interest rate risk as it borrows funds at fixed rates.



### **Related party transactions**

The following transactions occurred with related parties during the three months ended October 31, 2017:

- A short term loan totalling \$387,630 was received from Ritec AG (2016 \$645,300)
- Short term loans totalling \$15,000 were received from employees (2016 \$42,500)
- Short term loans totalling \$13,863 were repaid to employees (2016 \$0)

The following balances with related parties were outstanding at October 31, 2017:

- Accounts payable totalling \$10,000 were due to directors (2016 \$10,000)
- Accounts payable totalling \$145,364 were due to officers (2016 \$129,037)
- A loan term loan totalling \$237,772 was due to the Chief Financial Officer (2016 \$237,496)
- A royalty provision was owed to MedMira Holding AG of \$110,000 (2016 \$110,000)
- A long term loan totalling \$13,500 was owed to an employee (2016 \$13,500)
- Short term loans totalling \$45,659 were owed to employees (2016 \$42,500)
- Three short term loans totalling \$1,033,680 are owed to Ritec AG (2016 \$645,300)
- A short term loan totalling \$46,414 was owed to an officer (2016 \$46,968)

### **Compensation summary**

A) Officers for Q1 2018

Name and Principal Position	Paid Compensation (\$)	Accrued Compensation Current year (\$)	Share- and Option- based Awards* (\$)	All other compensation (\$)	Total Compensation current year (\$)	Paid Compensation related to previous fiscal years (\$)	Accrued Compensation related to previous fiscal years (\$)
Hermes Chan <i>CEO</i>	50,615	-	-	-	50,615	-	-
Robyn Cook <i>CCO</i>	28,269	-	-	-	28,269	-	-
Markus Meile <i>CFO</i>	-	37,471	-	-	37,471	15,758	100,548

<sup>1</sup> All other compensation includes pension fund contributions and/or bonuses paid out.

\*The Company makes certain estimates and assumptions when calculating the fair value of option-based awards. The Company uses an option-pricing model which includes significant assumptions including estimates of the expected volatility, expected life, expected dividend rate and expected risk-free rate of return. Changes in these assumptions may result in a material change to the amounts recorded for the issuance of stock options.



### B) Directors for Q1 FY2018

Name and Principal Position	Paid Compensation (\$)	Accrued Compensation Current year (\$)	Share- and Option- based Awards* (\$)	Total Compensation current year (\$)	Paid Compensation related to previous fiscal years (\$)	Accrued Compensation related to previous fiscal years (\$)
Hermes Chan						
Member of the	-	-	-	-	-	-
Audit Committee						
Dr. Shou-Ching Tang						
Direction, Member					-	
of the Audit and						
Nomination and	-	-	-	-		-
Compensation						
Committee						
Marvyn Robar						
Director/Chairman						
of the						
Board/Member of						10.000
Audit and	-	-	-	-	-	10,000
Nomination &						
Compensation						
Committee						

\*The Company makes certain estimates and assumptions when calculating the fair value of option-based awards. The Company uses an option pricing model which includes significant assumptions including estimates of the expected volatility, expected life, expected dividend rate and expected risk-free rate of return. Changes in these assumptions may result in a material change to the amount recorded for the issuance of stock options.

#### Internal control systems and disclosure controls

To ensure the integrity and objectivity of the data, management maintains a system of internal controls comprising of written policies, procedures and a program of internal reviews which provides reasonable assurance that transactions are recorded and executed in accordance with its authorization that assets are properly safeguarded and that reliable financial records are maintained.

Management is currently updating existing standardized processes to improve internal controls and reduce compliance costs. The updated controls will help improve timeliness and accuracy of financial records as well as continue to ensure that the Company's assets are properly safeguarded.

Disclosure controls and procedures within MedMira have been designed to provide reasonable assurance that all relevant information is identified to the Disclosure Committee to ensure appropriate and timely decisions are made regarding public disclosure.

Management, under the supervision of the Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's internal control over financial reporting and based on this evaluation, has concluded that internal control over financial reporting was effective as at October 31, 2017.

Due to inherent limitations, internal control over financial reporting and disclosure controls can provide only reasonable assurances and may not prevent or detect misstatements. Furthermore, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Audit Committee of the Board of Directors of MedMira reviewed this MD&A, and the condensed interim consolidated financial statements of MedMira for October 31, 2017 and MedMira's Board of Directors approved these documents prior to release.

# **Risk and uncertainties**

For the three month period ended October 31, 2017 the Company has not identified any significant changes to the risks and uncertainties it is exposed to which were previously described in the annual MD&A for the year-ended July 31, 2017.